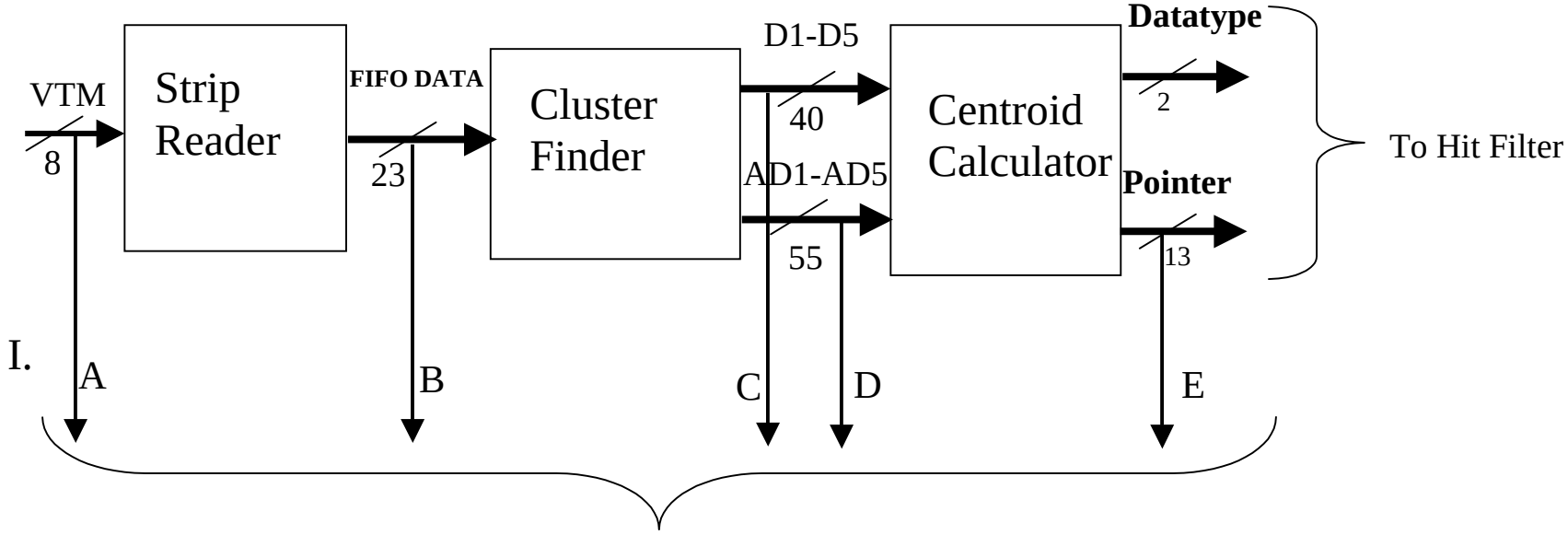
Details about Data Streams required from the Software model

Block Diagram for the STC



Data streams for the Cluster Finder and Centroid Calculator

- STRIP READER

  The Strip reader (or decoder) block is implemented with reference to the Section 2.1.

  Input - the 8-bit stream of VTM data.

  Output - a 23-bit word.

- CLUSTER FINDER

  The Cluster finder block is implemented according to the Section 2.2.

  Input (cluster finder): 23-bit word stream

  Output (cluster finder): Five (D1-D5) 8-bit buffers, and 11-bit address stream (AD1-AD5) for each data field.

- CENTROID CALCULATOR

  The Centroid finder (or calculator) block is implemented according to the Section 2.2.

  Input (Centroid finder): Five data buffers (D1- D5) from the Cluster finder.

  Output (Centroid finder) -13-bit Centroid address and the datatype of the centroid calculated.

- HIT FILTER

  The Hit filter will be implemented according to the details in Section 2.4.

  Input: Centroid (13-bit value) from the Centroid finder, the datatype (2-bit value) of the centroid and also the road data (each road will have a pair of 11-bit values).

  Output: All the centroid values that fall in between the road data values.

II. Data required for L3 buffering

A. Raw SMT Data (input to the strip reader).
B. Corrected data (output of the strip reader).
C. Cluster data (used for finding the cluster)
D. Corresponding Cluster Data strip addresses.
E. Centroid values (output of the Centroid Calculator).
F. Centroid values in the hit filter (the values stored in the output FIFO of the hit filter). (not shown)
G. The addresses of the Bad Channels (not shown on the figure).